

**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 6:56 AM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 1152 Const Calendar Day: 725 Date: 30-May-2014 Friday

Inspector Name: Brignano, Bob Title: Transportation Engineer

Inspection Type:

Shift Hours: Break: Over Time:

Federal ID:

Location:

Reviewer: Schmitt, Alex Approved Date: Status: Submit

**04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge****Weather**

Temperature 7 AM

12 PM

4PM

Precipitation

Condition overcast am, clear pm

Working Day ☒ If no, explain:**Diary:**

Dispute

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314.

There is work in the field on setup of TR's 14-17. Crews at the Pier 7 warehouse area are working an 8-hour shift 0600 through 1430. Ironworker Jared Garrett works at the TR site between 0600 and 1100, and then he leaves for the day at lunch (he is working a 5-hour short shift today). Ironworker Jonathan Canites works at the TR's briefly in the morning (~0600~0630) and after lunch (~1130 and ~1430), with the non-CCO 314 operations elsewhere at the Pier 7 warehouse area (or possibly worked on the bridge site) at other times in the day not covered by this diary. Laborer Carlos (Pedro) Garcia works all day on CCO 314. Operator John Sabatino works at the CCO 314 site for a combined time of less than 1 hour (~1200~1215 and ~1315~1330), with the non-CCO 314 operations elsewhere at the Pier 7 warehouse area at other times in the day not covered by this diary.

At the start of the day, the laborer works on the timber stacks for support of the traffic plates. He positions 12x12's, 8x8's, 6x6's, and 4x6's. Then, he continues work to secure the timber so they work together and are stable to support the traffic plates – some of this work is in the morning, but most of the securing of the timbers is done by the laborer in the afternoon.

At the start of the day, the ironworkers continues work on the guide angles at TR's 16 and 17. Yesterday, the ironworkers had started but not finished the work to remove the guide angles, get the shims to raise up the guide angles, and chamfer the end of the guide angles. The guide angles will be shimmed up with plate washers taken from TR's 5 to 13. A disk grinder is used to chamfer the end of the guide angles so that if they do hit the vertical plate at the end of the jacking beam, there is an opportunity for the jacking beam to push past the guide angles. Final installation of the guide angles is not done today because work on the stainless steel slide plate needs to be done first and it is too early to do that now with the end plates not installed yet.

Later in the morning, the laborer does work on the VGO wire run at the north end of the TR's. VGO has placed all of their wires in the timber runs that previously only had a bottom and 2 sides. This morning, the laborer secures the wire run pieces to each other and adds tops to the wire runs.

Later in the morning, the ironworker begins work on the flashing at TR's 16N and 16S, because VGO completed strain gauge installation work two days ago and does not need to rotate the rod any more. This work starts with shifting and securing the test rod in the center of the hole in the diaphragm plates between the wet chambers and the dry chamber. Then, a small quantity of touchup epoxy paint (Carboline



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Carboguard 890) is mixed so that damaged paint in the holes in the diaphragm plates for the test rod can be replaced – note that this rod shifting and touchup painting work is done at both TR's 16 and 17, at both the north and south ends, despite the next work done by the ironworker only being at TR 16. Then the flashing/bellows and plate washer are bolted using 1/4" hardware to the diaphragm plate. Note that caulking (Loctite 598 High Performance RTV Silicone Gasket Maker, product approved by the DJV for use in the wet chamber) is applied between the flashing flange and the diaphragm plate. The 1/4" hardware bolt heads are in the wet chamber and the nuts are tightened from the dry chamber side with access through the handhole in the top of the test rig. This bolting work is completed at both the north and south bellows/flashing at TR 16, but there is still more caulking necessary at these locations.

After the lunch break, the ironworker removes the blocking under the test rod inside the dry chambers at TR's 14 and 15. During installation of the rod, blocking was used to support the rod, but this blocking cannot be left in place supporting the rod during the jacking steps because it could add an undesirable moment to the rod with the addition of support points (the DJV has prohibited intermediate support points). Now that the rod is resting on the bottoms of the holes in the end plates and the test rod nuts are hand tight, the blocking can be removed. Working through a handhole, the ironworker uses a small jack with a hand pump to slightly raise the rod to remove the blocking that was tight under the rod. The blocking was at the far north and far south handholes in each test rig. The blocking pieces are 4x6 timbers, with the 6" dimension vertical to support the rod, and after removal, the blocking is reinstalled in the test rig box under the rod with the 4" dimension vertical – the timber does not support the rod (gap between the top of the timber and the bottom of the rod). Previously there were 2 other blocking pieces left in the test rigs at the other 2 handholes with the shorter dimension vertical, and with the removal and reinstallation of the blocking today, there are now 4 timber blocks in each test rig dry chamber. These timber blocks do not support the test rod during the test (tensioning steps), but after a rod break, they will keep the rod and the fracture surface off the bottom of the test rig box to help keep it clean.

After the work on the blocking inside TR's 14 and 15, the ironworker, with help from the operator, installs the TR 14S and TR 15S traffic plates. They can do this work now that VGO has installed the displacement transducers at these 2 locations.

After work on the traffic plates at TR's 14 and 15, the ironworker does some work on caulking at TR 16S and 16N, where some of the bellows/flashing work happened earlier this morning. Caulk is applied all around the flashing/bellows flange and the plate washer against the diaphragm plate to assist with sealing. The bolt heads inside the wet chamber are covered with caulk to isolate that mechanically galvanized material from the wet chamber and to assist with sealing. The nuts in the dry chamber are also caulked to assist with sealing the wet chamber. The caulking used is Loctite 598 High Performance RTV Silicone Gasket Maker, product approved by the DJV for use in the wet chamber.

Then, the ironworker goes to TR 17 for more bellows/flashing work, because VGO completed strain gauge installation work yesterday and does not need to rotate the rod any more. Working only at TR 17S because there is not enough time in the shift to also work at TR 17N, the flashing/bellows and plate washer are bolted using 1/4" hardware to the diaphragm plate. Note that caulking (Loctite 598 High Performance RTV Silicone Gasket Maker, product approved by the DJV for use in the wet chamber) is applied between the flashing flange and the diaphragm plate. The 1/4" hardware bolt heads are in the wet chamber and the nuts are tightened from the dry chamber side with access through the handhole in the top of the test rig. This bolting work is completed at the south bellows/flashing at TR 17, but there is still more caulking necessary at this location.

The ironworker also works on a TR 16 traffic plate to torch cut a larger handhole for better future access to the test rig nut below. This cutting is done with the traffic plate not on the test rig yet.

Working from VGO on site today are Rob Rutledge, Nick Buck, and Pamela Wallace. They start work on site at 0800. Dave Van Dyke is not on site today because he is flying out this morning to go back to Oregon. VGO takes a lunch break at 1200, which includes Rutledge driving Buck and Wallace to the airport to fly back to Oregon in the afternoon. Rutledge arrives back on site in the afternoon to continue instrumentation work until leaving the site at 1700. VGO works this morning to connect the strain gauges



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at TR 17 to the wire run to the eDAQ and performs QC checks. After yesterday's work by ABF to caulk the SWPPP containments in the area, VGO installs the displacement transducers in the morning at TR's 14 and 15. This displacement transducer work also involves calibration checks. Work is complete at TR 14 ~0900, and work is complete at TR 15 ~1000. In the afternoon, VGO installs the thermocouples at TR's 14S and 15S now that ABF has completed work in the area installing the traffic plates. With everything wired at TR's 14 and 15 and all the strain gauges connected at TR's 16 & 17, VGO begins instrumentation checks, including highspeed checks to look for any instrumentation problems.

Scott Croff and Elijah Turner from CT-METS begin work on the wire runs for the AE system. They work between ~1130 and ~1430 to run the wires from the toolbox with their data logger to the different test rigs. they do not install any AE sensors yet, and this is just wire run work. The wire runs are in timber protection pieces previously built and placed by ABF.

The couplers for TR's 16 & 17 were shipped by Dyson two weeks ago on Friday 5/16/2014, but they were lost by the shipping company (see 5/28/2014 for details). Today, ABF gets an update from Dyson on the fabrication of new couplers. Dyson says today that the fabrication of couplers to replace those lost by the freight company will be completed and ready for shipment in a week on Friday, June 6, 2014. They will be air freighted for delivery on Monday, June 9, 2014. These new couplers are necessary because the previously fabricated couplers for TR's 1-4 are with 4" 8UN threads at one end and 3" UNC threads tapped oversized for galvanizing at the other end, but the test rods with 3" UNC threads for TR's 16 & 17 are not galvanized.

A compressor – IR 185 ABF ID 002039 – is used for some time today and is on idle/standby at the test rig work area the rest of the day. A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is used for most of the day. A 40kW generator – MQ Power 40 – ABF ID 002051 is on idle/standby at the test rig work area. A Hydraulic Pump for running the jacks is on idle/standby at the test rig work area. An oxyacetylene torch is used for portions of the day. An extendable forklift (Gradall 544D – ABF ID 002005) and Hyster 155 forklift (ABF ID 002375) are used at different times at the TR's. A Kubota Cart is used by the laborer and a second Kubota Cart is used at times by the ironworkers.

Note that there is k-rail at this work area. Some of the k-rail is rented and addressed by the rental agreement. Some of the k-rail is ABF's k-rail used on site and paid as rented from ABF on a daily basis. To elevate the k-rail, crane mats and timber blocking (12x12's) are in use. The k-rail quantities are as follows:

10' bought k-rail = 20 pieces
20' rented k-rail = 10 pieces
20' ABF k-rail = 6 pieces

The tabulation of the 20' ABF k-rail is as follows:

Two (2) 20' ABF k-rail at the north end of TR 17.
Two (2) 20' ABF k-rail at the north end of TR 16.
One (1) 20' ABF k-rail at TR 15 (longitudinal running).
One (1) 20' ABF k-rail at TR 14 (longitudinal running).

The agreed extra work with ABF is as follows:

Engineer Kelvin Chen - 3 hrs
Laborer Carlos (Pedro) Garcia - 8 hrs
Ironworker Jared Garrett - 5 hrs
Ironworker Jonathan Canites - 2 hrs
Operator John Sabatino - 1 hr
Radios (4 radios) - 16 hrs
Kubota Cart - 8 hrs
Extendable Forklift - 2 hrs
7kW Generator - 8 hrs
Skilsaw - 8 hrs
k-rail: 6 pcs @20'



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Crane Mats (12x12 - 5'x16') - 2 pcs

Crane Mats (12x12 - 5'x7') - 8 pcs

See the attached Extra Work Order - Signed with ABF for CCO 314 work